I.2-UNIX-ICP   PROGRAM EXECUTION INFORMATION FOR THE CALIBRATION
               SYSTEM   INTERACTIVE CALIBRATION PROGRAM (ICP) ON UNIX
               SYSTEMS

Apps Defaults Tokens

ICP use the Apps_Defaults to set execution controls and path names
(see Chapter I.2-UNIX-APPSDFLT).

The token icp_rls specifies the directory where program ICP is
stored.

The token icp_scripts specifies the directory where scripts run_mcp3,
run_mcp3_remsh and relabel used by ICP are stored. The first two
scripts are used to run MCP and the last to manage edited control
files.

The token home_files_workstation specifies where the user's HOME
files are located and the token icp_interface_workstation where the
MCP-ICP data interface directory is located if different than
home_files_workstation. These tokens allow ICP to run MCP on the
workstation where the ICP-MCP data interface directory is located.
This eliminates writing results over the local net which can improve
performance.

The token mcp3_icp_iface should be set for each user so that users
will not see each other's results. All of the files in this
directory are removed each time ICP stops.

The token icp_pw is used by ICP for maintenance of the tree structure
for the control decks. Creation and deletion of regions and basins
are minimally protected and watersheds are not protected.

The token icp_editor specifies the editor to be used to edit ASCII
text documents, the wide-listing and the control deck. If the user
does not use the editor token or it is blank then a standard X/Motif
Text Widget is used.

Table 1 lists the token name, the usual value and description.

Control Decks Storage Directory Structure

The control decks are stored in subdirectories under the directory
defined by the token mcp3_decks.

The first level is the region name such as abrfc, nerfc, wgrfc, etc.

The next level is the basin name with a subdirectory for each basin.

The last level is watershed names with a subdirectory for each
watershed that contain the control deck files. ICP uses three kinds
of control decks - .curr, .prev and .best. For example the current
control deck for OFSTEST Segment AFTNC in North Carolina would be in
$(mcp_decks)/ofstest/nc/aftnc/aftnc.curr.

<u>Miscellaneous</u>

1. Special consideration for script run_mcp3_remsh:

    Script run_mcp3_remsh is used to run MCP remotely on the user's
    home_files_workstation. In the script the environmental variable
    APPS_DEFAULTS is specified and exported. The value is the
    complete path to the system wide .Apps_defaults file.

2. Automatic creation of the ICP-MCP data interface directory:

    If the ICP-MCP data interface directory specified by the token
    mcp3_icp_iface does not exist ICP will create it in the user's
    $HOME directory structure.

3. For faster running when not running on the user's home files
    workstation:

    When MCP is run by ICP it writes data for the graphics. If ICP is
    run while logged into a machine that is different the home files
    workstation or MCP-ICP interface workstation, the data is written
    onto the net, local or otherwise. This is because the ICP-MCP
    data interface directory is expected there as indicated by the
    Apps_Defaults token mcp3_icp_iface. The use of the net will slow
    the execution time.

    The slow down can be reduced a few items are provided so ICP can
    run MCP by executing a remote shell on the user's home files (or
    mcp3_icp_interface, if indicated in Apps_Defaults token
    icp_interface_workstation) workstation. This will shorten running
    time from minutes to seconds. Two things are needed:

        a. the token home_files_workstation or
            icp_interface_workstation needs to be entered into the
            user's .Apps_defaults file
        b. a .rhosts file needs to be in the user's $HOME directory

    The form of the entries is:

        home_files_workstation : <hostname>
        icp_interface_workstation : <hostname>

        where <hostname> is the hostname of the machine address

    The .rhosts file has a line for each machine different from the
    user's home file workstation which the user might use.

    The form of the lines is:

        abcdefg user_login_id

    With these two items in place ICP can remotely logon to the user's
    home file workstation without needing the user's password.
    Without the .rhosts line the remote logon will be rejected, the
    script will terminate and MCP will not be run.

4. How MCP constructs path to the time series:

    MCP appends to the value defined in the token calb_data_dir the
    string in the control deck on the card following the definition of
    an input time series. There is a limitation of 100 bytes on the
    base string (token: calb_data_dir) and 35 in the control deck
    string.

5. Preparation of input time series:

    The rounding of precipitation data to hundredth of an inch level
    can cause loss of about 4 percent of the precipitation. To reduce
    this loss at least 3 decimal places of precision should be used in
    the input files when the data is in inches.

Table 1. Apps_Defaults tokens used by ICP

Token Name	Usual Value	Description
mcp_decks	$(calb_input)/mcp3/decks	ICP - to locate the control decks - this is the branch-root for the control deck storage structure - requires a subdirectory named 'regions'
mcp_dir	$(calb_bin)	ICP - to locate MCP
mcp3_icp_iface	$(HOME)/icp/mcp3_ntrfc	ICP and MCP - directory to exchange data and results
icp_editor	vi | nedit	ICP - name of editor program - if not specified an X-Motif Text Widget is used
icp_pw	hILLEL	ICP - minimal protection for control deck tree structure maintenance
calb_data_dir	$(calb_input)/mcp3/data	MCP - to locate root of search for input time series
home_files_workstation		ICP - this is the workstation where the user's files physically reside - it is used in ICP to run MCP on the user's home machine because that is where the data interface is located
icp_interface_workstation :		ICP - allows placement present only if of interface on workstation other different from than home_files_workstation. home_files_workstation - use of this token implies maintenance of mcp3_icp_iface token - use of $LOGNAME or $USER or what is used to identify user is indicated in such maintenance

The following tokens are defined in the system-wide .Apps_defaults
file.

Three convenience tokens:

icp_dir	$(apps_dir)/nwsrfs/icp	user - to locate icp

Table 1. Apps_Defaults tokens used by ICP

Token Name	Usual Value	Description
icp_rls	$(icp_dir)/bin/RELEASE	by using the go function
icp_arc	$(icp_dir)/bin/ARCHIVE	

Supporting tokens:

calb_dir	$(apps_dir)/nwsrfs/calb	
calb_rls	$(calb_dir)/bin/RELEASE	
calb_arc	$(calb_dir)/bin/ARCHIVE	
calb_bin	$(calb_dir)/bin/RELEASE	
calb_input	$(calb_dir)/input	